

Abstract of the Invention

A system and method are provided for fabricating an orifice plate for use in an ink jet printing system. Initially, a substrate base is provided, and a controlled-release layer is applied to a surface of the substrate base. A conductive metal layer is adherently coated on the controlled-release layer. At least one dielectric peg is created on a portion of the conductive metal layer, and a nozzle layer is applied on the conductive metal layer to partially cover the dielectric peg. Photolithography is used to define a trench that covers the nozzles prior to formation of a second reinforcing layer. The controlled-release layer is removed to separate the orifice plate from the substrate base. The conductive metal layer is selectively etched from the nozzle layer to produce a completed multi-layer orifice plate.